2014-06-11

Twin Otter

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Twin Otter support may be requested by filling out this request form.

Mission

The CIRPAS Twin Otter is an instrumented twin-engine turboprop aircraft. It supports individual scientists as well as teams of scientists from various Universities and Laboratories who are interested in lower-tropospheric phenomena and air/sea interaction. Payload may be selected from a large suite of state of the art meteorological, aerosol, and cloud particle sensors, while additional equipment collaborating scientists may wish to include can be integrated as well. Twin Otter mission have been sponsored by ONR, NSF, DOE, NOAA, NASA, CARB, and NRL.

Instruments may be installed in racks inside the cabin where a well characterized community inlet delivers ambient air samples, or in pods either suspended by wing-mounted pylons or mounted on a hard point on the cabin roof. Optical ports and windows are on the airplane's belly and in the cabin roof.

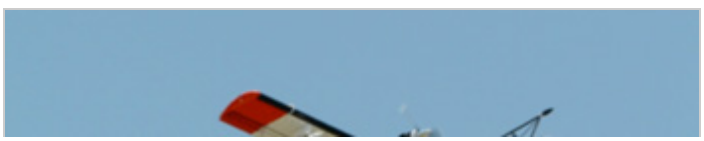
CIRPAS staff calibrates and maintains the facility payload and provides fully reduced, synchronized, and coherent data sets to the collaborating scientists.

The Twin Otter is based at the CIRPAS *Marina Facility,* but has been deployed to various locations in North, South, and Central America and Asia . Support of the Twin Otter may be requested by use of the form linked at the top of the page.

Points of contact are:

Roy K. Woods, 3200 Imjin Road, Marina, CA 93933.
Tel: (831) 384-2776 x12 or (831) 241-4800.
E-mail: rkwoods@nps.edu. (availability and flight issues)

Haflidi H. Jonsson, 3200 Imjin Road, Marina, CA 93933.
Tel: (831)384-2776 x11, or (831)-241-4806.
E-mail: hjonsson@nps.edu. (measurements and science issues)



CIRPAS Twin Otter

Specifications

The CIRPAS Twin Otter in non-pressurized turbo-prop, twin-engine aircraft:
***Payload Capacity**: 1500 lbs.*
***Available Payload Power**: 200 Ampere of 28 VDC, or 5600 Watts, of which up to 4000 watts may be inverted to 120V AC at 60 Hz.*
***Endurance**: About 5 hours, fully loaded.*
***Practical Mission Ceiling**: 18,000 feet, 12,000 feet without oxygen.*

Recent Publications

*Morales, R. and Nenes, A. and **Jonsson, H**. and Flagan, R. C. and Seinfeld, J. H. (2011) Evaluation of an entraining droplet activation parameterization using in situ cloud data. J. Geophys. Res, 116. Art. No. D15205. ISSN 0148-0227*

*Hanh T. D., A. Sorooshian, J. S. Craven, S. P. Hersey, A.R. Metcalf, X. Zhang, R. J. Weber, **H. Jonsson**, R. C. Flagan, J. H. Seinfeld. (2011) Water-soluble organic aerosol in the Los Angeles Basin and outflow regions: Airborne and ground measurements during the 2010 CalNex field campaign; J. Geophys. Res., 116, D00V04, 15 PP., 2011 doi:10.1029/2011JD016674*

*Wilson, C and **H. Jonsson**, Measurement of Cloud and Aerosol Particles from Aircraft, AerosolMeasurement, Wiley & Sons (2011), pp 655-665, Ed. Kulkarni, P., Baron, P. A., Willeke, K.*

*Sorooshian, A., Murphy, S. M., Hersey, S., Bahreini, R., **Jonsson, H.,** Flagan, R.C., and Seinfeld, J. H. (2010) Constraining the contribution of organic acids and AMS m/z 44 to the organic aerosol budget: On the importance of meteorology, aerosol hygroscopicity, and region. Geophys. Res. Lett., 37 . Art. No. L21807. ISSN 0094-8276*

(extensive list of publications)